


**ICF International / Laboratory Data Consultants**

Environmental Services Assistance Team, Region 9  
 1337 South 46<sup>th</sup> Street, Building 201, Richmond, CA 94804-4698  
 Phone: (510) 412-2300 Fax: (510) 412-2304

**MEMORANDUM**

TO: Lynda Deschambault, Remedial Project Manager  
 Site Cleanup Section 1, SFD-7-1

THROUGH: Rose Fong, ESAT Task Order Manager (TOM)  
 Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager  
 Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041  
 Technical Direction Form No.: 00405115

DATE: March 11, 2010

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC QB02
CERCLIS ID No.:	CAD042245001
Case No.:	39375
SDG No.:	MY5QZ2
Laboratory:	Bonner Analytical Testing Co. (BONNER)
Analysis:	Select CLP Dissolved Metals by ICP-AES
Samples:	4 Groundwaters (see Case Summary)
Collection Date:	February 17, 2010
Reviewer:	Stan Kott, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: Cynthia Gurley, CLP PO USEPA Region 4  
 Steve Remaley, CLP PO USEPA Region 9

CLP PO: ☒ FYI ☐ Action

SAMPLING ISSUES: ☒ Yes ☐ No



## Data Validation Report-Tier 3

Case No.: 39375  
SDG No.: MY5QZ2  
Site: Omega Chem OU2  
Laboratory: Bonner Analytical Testing Co. (BONNER)  
Reviewer: Stan Kott, ESAT/LDC  
Date: March 11, 2010

### I. CASE SUMMARY

#### Sample Information

Samples: MY5QZ2, MY5QZ3, MY5QZ4, and MY5QZ5

Concentration and Matrix: Low and Medium Concentration Groundwater  
Analysis: Select CLP Dissolved Metals by ICP-AES  
SOW: ILM05.4  
Collection Date: February 17, 2010  
Sample Receipt Date: February 18, 2010  
Preparation Date: February 18, 2010  
Analysis Date: February 18, 2010

#### Field QC

Field Blanks (FB): None Provided  
Equipment Blanks (EB): None Provided  
Background Samples (BG): None Provided  
Field Duplicates (D1): MY5QZ4 and MY5QZ5

#### Laboratory QC

Method Blank & Associated Samples: Preparation Blank-Water (PBW) and samples listed above

Matrix Spike: Not required for requested analytes  
Duplicate: MY5QZ2D  
ICP Serial Dilution: MY5QZ2L

Analysis: Select CLP Dissolved Metals by ICP-AES

<u>Analytes</u>	<u>Sample Preparation and Digestion Date</u>	<u>Analysis Date</u>
ICP-AES Metals	February 18, 2010	February 18, 2010

#### CLP PO Action

None.

#### Sampling Issues

1. The field duplicate quality control (QC) sample MY5QZ5 was not sent blind to the laboratory.
2. The samples of this SDG were not adequately preserved in the field to a pH of less than 2 as specified in the SOW. See Validity and Comments section, Comment A.

## Additional Comments

The samples of this SDG were analyzed for dissolved calcium, magnesium, potassium, and sodium by inductively coupled plasma-atomic emission spectroscopy (ICP-AES).

Laboratory Form DC-1, Sample Log-in Sheet, indicates the samples of this SDG were received at a pH of 2. Since these sample pHs are outside the less than 2 pH limit specified in the SOW, a request was sent to the laboratory to confirm the reported sample pHs. A laboratory response to this request has not been received to date. Refer to the attached Communication Record Log (CRL) for details.

All method requirements specified in the EPA Contract Laboratory Program (CLP) Inorganic Statement of Work (SOW), except as noted, have been met.

Analytical results are listed in Table 1A with qualifications. Definitions of data qualifiers used in Table 1A are provided in Table 1B.

This report was prepared in accordance with the following documents:

- Region 9 Standard Operating Procedure 906, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Inorganic Data Packages*;
- USEPA Contract Laboratory Program Statement of Work For Inorganic Analysis Multi-Media, Multi-Concentration ILM05.3, March 2004;
- ILM05.3 to ILM05.4 Summary of Changes, December 1, 2006; and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

## **II. VALIDATION SUMMARY**

The data were evaluated based on the following parameters:

	<u>Parameter</u>	<u>Acceptable</u>	<u>Comment</u>
1.	Data Completeness	Yes	
2.	Sample Preservation and Holding Times	No	A
3.	Calibration	Yes	
	a. Initial		
	b. Initial and Continuing Calibration Verification		
	c. CRQL Check Standard (CRI)		
4.	Blanks	Yes	
5.	ICP Interference Check Sample (ICS)	Yes	
6.	Laboratory Control Sample (LCS)	Yes	
7.	Duplicate Sample Analysis	Yes	
8.	Matrix Spike Sample Analysis	Yes	
9.	ICP Serial Dilution Analysis	No	B
10.	Field Duplicate Sample Analysis	Yes	
11.	Sample Quantitation	Yes	
12.	Overall Assessment	Yes	

N/A = Not Applicable

### III. VALIDITY AND COMMENTS

- A. The following results are estimated and flagged "J-" in Table 1A due to inadequate sample preservation.

- All analytes in all samples

These samples did not meet SOW sample preservation criterion. The samples were not adequately preserved in the field to a pH of less than 2 as shown below.

Sample Number	pH
MY5QZ2	2
MY5QZ3	2
MY5QZ4	2
MY5QZ5	2

Sample results may be biased low.

- B. The following results are estimated and flagged "J" in Table 1A because an ICP serial dilution result is outside method QC limits.

- Potassium in all samples

The percent difference for the ICP serial dilution analysis of sample MY5QZ2L did not meet the  $\pm 10\%$  criterion for the analytes shown below.

Analyte	% Difference
Potassium	+50

Results reported for potassium in all samples are considered quantitatively uncertain. Chemical and physical interferences may exist due to sample matrix effects. The result for the diluted sample was higher than the original. Therefore, the reported sample results reported for potassium may be biased low.

*A five-fold dilution of the laboratory QC sample is performed in association with the ICP procedure to indicate whether interference exists due to sample matrix effects. If the analyte concentration is sufficiently high (minimally a factor of 50 above the MDL in the original sample), the five fold serial dilution must agree within 10% of the original results after correction for dilution.*



## ANALYTICAL RESULTS

Page 1 of 1

Case No. : 39375 SDG No. : MY5QZ2  
 Site : OMEGA CHEMICAL CORPORATION  
 Lab : BONNER ANALYTICAL TESTING (BONNER)  
 Reviewer : Stan Kott, ESAT/LDC  
 Date : March 11, 2010

Table 1A

**QUALIFIED DATA**  
**Concentration in ug/L**

Analysis Type : Low and Medium Concentration  
 Groundwater Samples for Select CLP  
 Dissolved Metals by ICP-AES

Station Location :	Dace 1			Pioneer 1			Pioneer 3			Pioneer 3FD			MDL			CRQL		
Sample ID :	MY5QZ2			MY5QZ3			MY5QZ4 D1			MY5QZ5 D1								
Collection Date :	2/17/2010			2/17/2010			2/17/2010			2/17/2010								
PARAMETER	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
CALCIUM	181000	J-	A	195000	J-	A	169000	J-	A	173000	J-	A	78.6			5000		
MAGNESIUM	40800	J-	A	36000	J-	A	31800	J-	A	32200	J-	A	61.7			5000		
POTASSIUM	7030	J-	AB	6670	J-	AB	6890	J-	AB	7010	J-	AB	106			5000		
SODIUM	151000	J-	A	107000	J-	A	115000	J-	A	117000	J-	A	51.6			5000		

Val - Validity. Refer to Data Qualifiers in Table 1B.

Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.

MDL - Method Detection Limit

N/A - Not Applicable NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs

FB - Field Blank, EB - Equipment Blank,

TB - Trip Blank, BG - Background Sample

CRQL - Contract Required Quantitation Limit

## TABLE 1B

### DATA QUALIFIER DEFINITIONS FOR INORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared in accordance with the document *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004.

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.





In Reference to  
Case: 39375 SDG No.: MY5QZ2

Contract Laboratory Program  
REGIONAL/LABORATORY COMMUNICATION SYSTEM

Communication Record Log

Date of Call: March 4, 2010

Laboratory Name: Bonner Analytical Testing Co. (BONNER)

Lab Contact: Chris Bonner or Brandon Beck

Region: 9

Regional Contact: Steve Remaley, CLP PO

ESAT Reviewer: Stan Kott, ESAT/LDC

Call Initiated By:      Laboratory   X   Region

In reference to data for the following samples: MY5QZ2 through MY5QZ5

Summary of Questions/issues Discussed:

The following items were noted during the review of this sample delivery group (SDG) data package. Please respond within 4 days as specified in ILM05.4 Statement of Work (SOW), Exhibit B, Section 2, 2.2. Send response and resubmissions to:

ICF International/Laboratory Data Consultants, Inc.,  
Environmental Services Assistance Team, USEPA Region 9 Laboratory  
1337 S. 46th Street, Building 201, Richmond, CA 94804, FAX 510 412-2304.

SDG: MY5QZ2

1. ILM05.4, Exhibit D, Section 8, Item: 8.1, specifies water/aqueous samples must be preserved to a pH of *less than* 2 (<2) in the field. However, Form DC-1, Sample Log-In Sheet (page 3), indicates the aqueous samples were received with a pH of 2. Review of the laboratory e-mails indicates the Sample Management Office was not notified about the received sample pH. Please review the sample receipt data and indicate if the sample pHs were less than 2 (<2) or 2. Please provide a corrected Form DC-1 only if the pHs were less than 2.

Summary of Resolution: To be determined.

